(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization

International Bureau



10/525473

(43) International Publication Date 11 March 2004 (11.03.2004)

PCT

(10) International Publication Number WO 2004/021659 A1

(51) International Patent Classification⁷: 27/20

H04L 27/00.

(21) International Application Number:

PCT/IB2003/003768

(22) International Filing Date: 14 August 2003 (14.08.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 02102229.8

EP 28 August 2002 (28.08.2002)

(71) Applicant (for DE only): PHILIPS INTELLECTUAL PROPERTY & STANDARDS GMBH [DE/DE]; Steindamm 94, 20099 Hamburg (DE).

(71) Applicant (for AE, AG, AL, AM, AT, AU, AZ, BA, BB, BE, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CY, CZ, DK, DM, DZ, EC, EE, ES, FI, FR, GB, GD, GE, GH, GM, GR, HR, HU, ID, IE, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK. LR. LS. LT. LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD. SE, SG, SK, SL, SY, SZ, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW only): KONINKLLJKE PHILIPS ELECTRONICS N.V. [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).

(72) Inventors; and

(75) Inventors/Applicants (for US only): BODE, Peter [DE/DE]; c/o Philips Intellectual Property & Standards GmbH, Weisshausstr. 2, 52066 Aachen (DE). BAUER, Harald [DE/DE]; c/o Philips Intellectual Property & Standards GmbH, Weisshausstr. 2, 52066 Aachen (DE). DIETSCH, Rainer [DE/DE]; c/o Philips Intellectual Property & Standards GmbH, Weisshausstr. 2, 52066 Aachen (DE).

(74) Agent: MEYER, Michael; Philips Intellectual Property & Standards GmbH, Weisshausstr. 2, 52066 Aachen (DE).

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

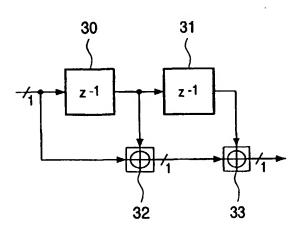
16

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

vice versa.

(54) Title: METHOD FOR GENERATING I/Q SIGNAL IN A TDMA TRANSMITTER AND CORRESPONDING MODULA-TOR



(57) Abstract: The present invention relates to a digital I/Q modulator which efficiently supports multi-time-slot operation of wireless TDMA transmitters employing linear power amplifiers. According to the present invention, dips are introduced in the envelope of the I/Q signal in the guard interval between adjacent time-slots or bursts. The dips avoid interference on adjacent radio frequency channels when the gain of the TX chain in switched abruptly in order to change the power level of the TX signal or when the modulation scheme is changed. Also, a method is provided for generating the dips, which is particularly attractive if the modulation scheme in adjacent time-slots changes from GMSK to 8PSK or

WO 2004/021659 A1 ||||||